

## Safety Data Sheet

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**REVISION (see box 16)**

Issue : 13 28 : 10 : 2009

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY	
<b>Product Name</b>	<b>CALMIC TYPE S FORMULATION - CASCADE</b>
<b>Description</b>	A ready-to-use sanitizer fluid for use in Calmic Sanitizer dispensers, where it is automatically dosed into the toilet flush water. This product is a clear, pale yellow liquid with a floral fragrance.
<b>Company</b>	Rentokil Initial Supplies, Liverpool, L33 7SR. Product advice line: +44 (0)151 548 5050 Emergency line: +44 (0)1293 858 000 E-mail: <a href="mailto:sds@rentokil.com">sds@rentokil.com</a>

2 HAZARD IDENTIFICATION	
<b>Classification (Supply – Use) : In compliance with EC Directive 1999/45.</b>	
<b>N Dangerous for the environment</b>	R50 <b>Very Toxic to aquatic organisms.</b>
<b>X<sub>n</sub> Irritant</b>	R41 <b>Risk of serious damage to eyes.</b>
<b>Adverse Physical, Chemical, Significant Human Health and Environmental Effects (See also box 11):</b>	
May cause serious damage to eyes. May be irritating to skin and upper respiratory system, especially on prolonged contact. If swallowed, may be irritating to the digestive system. No other significant adverse effects expected under normal conditions of handling and use.	

3 COMPOSITION / INFORMATION ON INGREDIENTS (SEE ALSO BOX 16)		
% w/w	Common*/Chemical Name, ELINCS/EINECS & CAS No. of Ingredients	EC 1999/45 Classification
>2.5 ≤10.0	Tinosan®* / 2-hydroxy-4,4'-dichlor-diphenylether EINECS : 418-890-8 CAS : 3380-30-1	X <sub>i</sub> : R41 N : R50
>10.0 ≤25.0	Non-ionic surfactant* / alcohol ethoxylate EINECS : Not available CAS : Not available	X <sub>n</sub> : R22 : R41
>2.5 ≤10.0	Non-ionic surfactant* / alcohol ethoxylate CAS : 68131-39-5	X <sub>n</sub> : R22 : R41 N : R50
>2.5 ≤10.0	Amphoteric surfactant* / alkyl dimethylamine betaine EINECS : 266-368-1 CAS : 66455-29-6	X <sub>i</sub> : R38 : R41
>2.5 ≤10.0	Ethanol EINECS : 200-578-6 CAS : 64-17-5	F : R11
≤1.0	Methanol EINECS : 200-659-6 CAS : 67-56-1	F : R11 T : R23/24/25 : R39/23/24/25
≤1.0	3:1 mixture of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one CAS : 55965-84-9	T : R23/24/25 : R34 : R43 N : R50,53

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<b>4 FIRST-AID MEASURES (SEE ALSO “ADVERSE EFFECTS” IN BOX 2)</b>	
<b>Inhalation</b>	Remove patient to fresh air, keep warm and at rest. Apply supportive measures if necessary and seek medical attention.
<b>Eye Contact</b>	Rinse affected eye with clean running water, or eyewash solution, for at least 15 minutes holding eyelids well apart. Rinse entire surface and do not allow run-off to contaminate unaffected eye. Seek medical attention.
<b>Skin Contact</b>	Remove and wash contaminated clothing immediately. Wash affected area thoroughly with soap and water. If the patient feels unwell seek medical advice.
<b>Ingestion (Swallowing)</b>	Do NOT induce vomiting. If unconscious place in the recovery position and apply supportive measures if necessary. If conscious give patient up to ½ litre or 1 pint of water to drink. Seek medical attention.
<b>Emergency Equipment Suggested</b>	Appropriate first-aid equipment should be provided. For the UK this should be in accordance with the Health & Safety (First-Aid) Regulations 1981. See also the Approved Code of Practice “First-aid at Work”.
<b>Note To Doctor</b>	Further information on all Rentokil Initial formulations is lodged with the National Poisons Information Service in the UK.

<b>5 FIRE FIGHTING MEASURES</b>	
<b>Fire Extinguisher Type</b>	Use carbon dioxide, foam, water, or dry powder extinguishers. Do NOT use a water jet.
<b>Special Fire-Fighting Procedures</b>	Wear suitable personal protective equipment.
<b>Special Exposure Hazards</b>	In a fire, oxides of carbon and nitrogen may be evolved.

<b>6 ACCIDENTAL RELEASE MEASURES</b>	
<b>Personal Precautions (See also box 8)</b>	Wear suitable personal protective equipment.
<b>Environmental Precautions</b>	This product is classified as dangerous for the environment. Keep away from drains, surface and ground water, and soil.
<b>Clean-up Procedure (See also box 13)</b>	Absorb spill with an inert material such as sand, earth or sawdust. Transfer to a suitable container for subsequent disposal.

<b>7 HANDLING AND STORAGE (SEE ALSO BOX 8)</b>	
<b>Handling Storage</b>	No specific handling requirements. Store in original container in a cool, dry, ventilated place out of the reach of children and away from food, drink and animal feeding stuffs.

<b>8 EXPOSURE CONTROLS/PERSONAL PROTECTION</b>	
<b>Exposure Standard - Directive EC/98/24 (1<sup>st</sup> IOELV Directive)</b>	Workplace Exposure Limit (WEL) for ethanol is 1920 mg/m <sup>3</sup> long-term exposure (8 hour Time Weighted Average). WEL for methanol is 266 mg/m <sup>3</sup> (8hr TWA) and 333 mg/m <sup>3</sup> short-term exposure (15 minute reference period). Suppliers of the 3:1 mixture of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one give an 8hr TWA of 0.076 mg/m <sup>3</sup> .
<b>Engineering Controls</b>	Where exposure may occur, engineering controls, rather than the provision of Personal Protective Equipment (PPE) should be employed. On completion of a risk assessment, the following PPE may be required:
<b>Eye Protection</b>	Wear eye/face protection.
<b>Hand Protection</b>	Suitable hand protection such as gloves.
<b>Skin Protection</b>	None necessary during normal handling and use.
<b>Breathing Protection</b>	None necessary during normal handling and use.
<b>Environmental Exposure Controls</b>	Use only in accordance with instructions given.

<b>9 PHYSICAL AND CHEMICAL PROPERTIES</b>			
<b>Appearance and Odour</b>	This product is a clear, pale yellow liquid with a floral fragrance.		
<b>pH</b>	4.9	<b>Solubility in Water</b>	Miscible.
<b>Density</b>	Not determined.	<b>Solubility in Other Solvents</b>	Soluble in fat- creates an emulsion when agitated.
<b>Flash Point</b>	49°C	<b>Explosive Properties</b>	None.
<b>Flammability</b>	Non-flammable.	<b>Combustibility</b>	Non-combustible.
<b>Boiling Point/Range</b>	Not determined.	<b>Oxidising Properties</b>	None.
<b>Vapour Density</b>	Not determined.	<b>Evaporation Rate</b>	Not determined.
<b>Vapour Pressure</b>	Not determined.	<b>Partition Coefficient</b>	Not applicable.
<b>Viscosity</b>	Not determined.	<b>Other Data</b>	Specific gravity: 1.029

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## 10 STABILITY AND REACTIVITY

<b>Conditions to avoid</b> <b>Materials to avoid</b> <b>Hazardous Breakdown Products</b>	Avoid extremes of temperature, e.g. below 0°C and above 40°C. Avoid contact with oxidising agents, copper and copper alloys. In a fire, oxides of carbon and nitrogen may be evolved.
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## 11 TOXICOLOGICAL INFORMATION (SEE ALSO BOX 2)

<b>Acute Toxicity</b>	Oral Inhalation Dermal	For a similar product: LD <sub>50</sub> (rat) : >5000mg/kg. For a similar product: LC <sub>50</sub> (rat) (4hr) : 5.14mg/L. For a similar product: LD <sub>50</sub> (rat) : >2000mg/kg.
<b>Corrosivity/Irritation</b>	Skin Eyes Respiratory tract	May be irritating to skin. May be irritating to eyes. Not determined.
<b>Sensitisation</b>	Skin Respiratory	By test, similar product is not a skin sensitiser. Contains no known respiratory sensitisers.
<b>Repeat-Dose Toxicity</b>		Product does not contain any components known to have any effects relating to repeated-dose toxicity.
<b>Mutagenicity Carcinogenicity</b>		Product does not contain any components known to have a mutagenic effect. Product does not contain any components known to have a carcinogenic effect.
<b>Reproductive Toxicity</b>	Fertility Development	Product does not contain any components known to have effects on fertility. Product does not contain any components known to be toxic to the reproductive system.
<b>Other Information</b>		None known.

## 12 ECOLOGICAL INFORMATION


<b>General Information</b>	This product is classified as very toxic to aquatic organisms. However, when used in accordance with instructions given, controlled release of this product is not expected to cause environmental contamination.
<b>Ecotoxicity Data</b>	For Tinosan : LC <sub>50</sub> (Bracydanio rerio) (96hr) : approx 2 mg/L : EC <sub>50</sub> (Daphnia Magna) (48hrs) : 0.32mg/L : EC <sub>50</sub> (Scenedesmus subspicatus) (72hrs) : approx 0.07mg/L : EC <sub>50</sub> (Activated Sludge) (3hrs) : approx 25mg/L
<b>Mobility Persistence and Degradability</b>	Not determined. Similar product is readily biodegradable: >60% biodegradation in closed bottle test (OECD 301D).  The surfactant(s) contained in the preparation complies (comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.
<b>Bioaccumulative Potential Other Adverse Effects</b>	Not determined. None known.

## 13 DISPOSAL CONSIDERATIONS

<b>Disposal of Waste / Containers</b>	This product is dangerous for the environment. Do not discharge to sewers, drains or watercourses. This product must be disposed of as hazardous waste. Empty containers may be disposed of as controlled waste in accordance with the appropriate regulations.										
<b>Classification</b> (Council Directive 91/689/EC, Commission Decision 2000/532/EC (amended) Commission Decision 2001/118/EC))	Under normal circumstances, waste product / empty containers will be disposed of by Rentokil Initial. <u>Hazard Code</u> : H3B – Flammable, H4 - Irritant										
<b>Note for Disposal</b>	<table><thead><tr><th><u>Components making the waste hazardous</u></th><th><u>Concentrations (%)</u>:</th></tr></thead><tbody><tr><td>Tinosan®</td><td>&gt;2.5 ≤10.0</td></tr><tr><td>Alcohol ethoxylate</td><td>&gt;10.0 ≤25.0</td></tr><tr><td>Alcohol ethoxylate</td><td>&gt;2.5 ≤10.0</td></tr><tr><td>Alkyl dimethylamine betaine</td><td>&gt;2.5 ≤10.0</td></tr></tbody></table> <p>The best means of disposal of any product is through proper use according to the label. For further advice about disposal in the UK, contact the local office of the Environment Agency (England and Wales) or Scottish Environment Protection Agency. Local rate from anywhere in the UK: +44(0) 870 850 6506</p>	<u>Components making the waste hazardous</u>	<u>Concentrations (%)</u> :	Tinosan®	>2.5 ≤10.0	Alcohol ethoxylate	>10.0 ≤25.0	Alcohol ethoxylate	>2.5 ≤10.0	Alkyl dimethylamine betaine	>2.5 ≤10.0
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**14 TRANSPORT INFORMATION (INTERNATIONAL UNLESS OTHERWISE INDICATED)**

<b>UN No.</b>	UN3082	<b>RIS Code</b>		
<b>Transport Category</b>	<b>3</b>	<b>UK Hazchem EAC</b>	*3Z	
<b>ADR 2009 (International Road)</b>	<b>Class 9</b>	<b>ADR HIN</b>	90	
<b>Proper Shipping Name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (CONTAINS 2-HYDROXY-4,4-DICHLOR-DIPHENYLETHER)		 UN3082	
<b>Limited Quantity Exemptions</b>	Maximum quantity per inner receptacle is 5 litres. Maximum quantity per outer package is 30kg. Combination packs only.			
<b>Special Requirements</b>	Not required.	<b>Packing Group</b>		III
<b>IMDG 2008 (Sea)</b>	<b>Class 9</b>	<b>IMDG EMS</b>		F-A, S-F
<b>Proper Shipping Name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (CONTAINS 2-HYDROXY-4,4-DICHLOR-DIPHENYLETHER)		 2 x 5 L	
<b>Limited Quantity Exemptions</b>	Maximum quantity per inner receptacle is 5 litres. Maximum quantity per outer package is 30kg. Combination packs only.			
<b>Special Requirements</b>	Not required.	<b>Packing Group</b>		III
<b>Note for Transport</b>	Local, State or National requirements may apply to the carriage of this product.			

**15 REGULATORY INFORMATION (HEALTH AND SAFETY INFORMATION (SEE ALSO BOX 2))**

<b>Safety Phrases</b>	S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	S39	Wear eye/face protection
<b>Additional Label Phrases</b>	Not required.	
<b>Legislation</b>	<p>Labelling is in accordance with UK regulations implementing the EC Directive 1999/45.</p> <p>Additional labelling requirements may be necessary in accordance with other National legislation. Outside the UK, the registration of this product may be necessary before use and any additional local requirements must be observed at all times.</p> <p>The information given on this Safety Data Sheet (SDS) <b>does not</b> constitute an assessment in accordance with Control of Substances Hazardous to Health (COSHH) Regulations 2002, in the UK. Other National measures or guidance should be followed where appropriate.</p>	

**16 Other Information and indication of revisions**

<b>Packaging Information</b>	A white, UN approved, 5 litre plastic jerrican with a screw top. Two supplied in an outer cardboard box.	
<b>Revisions</b>	Changes have been made to the content of boxes 01, 02, 03, 06, 09, 12, 13, 14, 15 & 16 (as indicated by the thick lines on the left-hand side of the boxes) compared with issue 12.	
<b>Risk phrase text</b> (From box 3 - These refer to the ingredients only. See box 2 for the product risk phrases)	R11	: Highly flammable.
	R22	: Harmful if swallowed.
	R23/24/25	: Toxic by inhalation, in contact with skin and if swallowed.
	R34	: Causes burns.
	R38	: Irritating to skin.
	R39/23/24/25	: Very Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
	R41	: Risk of serious damage to eyes.
	R43	: May cause sensitisation by skin contact.
	R50	: Very toxic to aquatic organisms.
	R50,53	: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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**Before using any product, ensure that you read and understand its label.**

The information contained in this safety data sheet is, to the best of our knowledge and belief, accurate and reliable at the time of publication. The information relates only to the specific material designated in this safety data sheet and may not be valid for such material if it is used in combination with any other material(s) or any other use than that specified herein. Rentokil Initial UK Ltd is not liable for the use of this product for any other purpose than that described in this safety data sheet. This does not affect your statutory rights. It is the user's responsibility to satisfy him/herself as to the suitability in completeness of such information for his/her own particular use.

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